

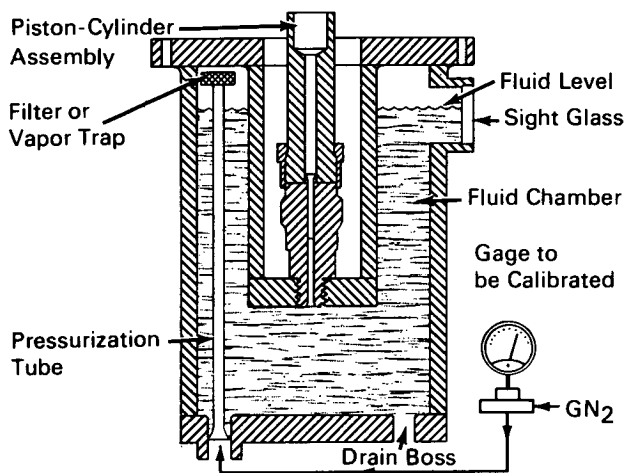
NASA TECH BRIEF



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Deadweight Calibration of Pressure Gages Without Contamination

Use of a novel fluid chamber, in conjunction with a conventional single-chamber hydraulic deadweight tester, eliminates cleaning of the gages with liquid O_2 after tests. During calibration the oil in conventional single-chamber testers contaminates the gages for gaseous N_2 . Commercial double-chamber



testers, with diaphragms separating the test oil from the gage fluid, are expensive and cumbersome, especially when the medium is changed; the innovation is simpler and cheaper.

Pressurized dry gaseous N_2 is applied to the oil of the reservoir through 0.25-in. stainless-steel tubing (see

fig.). The same gas is also admitted to the pressure gage (being calibrated) through a tee ahead of the reservoir. The oil is further isolated from the gage by a filter (vapor trap) at the inner end of the gas inlet to the reservoir.

The innovation is simple in construction and operation, and its inexpensive materials make it suitable for small-shop fabrication. A sight glass provides a positive check on the fluid level. The new chamber is especially suited to small organizations unable to afford elaborate equipment.

Note:

No additional documentation is available. Specific questions, however, may be directed to:

Technology Utilization Officer
Code A&TS-TU
Marshall Space Flight Center
Huntsville, Alabama 35812
Reference: B70-10586

Patent status:

Inquiries about obtaining rights for the commercial use of this invention may be made to NASA, Code GP, Washington, D.C. 20546.

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